

## Claims

- [c1] 1.A method of image compression and decompression comprising:  
selecting a portion of an image in a span of interest obtained from an acquired imaging sequence;  
applying lossless compression to the portion of the image in a span of interest and obtaining a compressed image sequence; and,  
applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence.
- [c2] 2.The method of claim 1, wherein the portion of the image is a plurality of frames in a span of interest.
- [c3] 3.The method of claim 1, wherein the portion is at least one frame in a span of interest.
- [c4] 4.The method of claim 1 further comprises archiving the analytically relevant image sequence.
- [c5] 5.The method of claim 1, wherein selecting the portion in the span of interest comprises having a user select option for selecting the portion of image.
- [c6] 6.The method of claim 5, wherein the user select option comprises segmenting an identifiable anatomy of a patient.
- [c7] 7.The method of claim 5, wherein the user select option comprises manually marking frames of interest.
- [c8] 8.The method of claim 5, wherein the user select option comprises sketch-gripping an image boundary.
- [c9] 9.The method of claim 1, wherein selecting the portion of image in the span of interest comprises:  
selecting the portion of the image in a time sequence; and  
selecting the portion of the image in a space sequence.
- [c10] 10.The method of claim 1, wherein selecting the portion of the image in the span of interest comprises selecting the portion of image in a time sequence.

- [c11] 11.The method of claim 1, wherein selecting the portion of the image in the span of interest comprises selecting the portion of image in a space sequence.
- [c12] 12. A method of image compression and decompression for images obtained by an imaging device, comprising :  
selecting a portion of an image of a span of interest obtained from the device;  
applying lossless compression to the portion of the image and obtaining therefrom a compressed image sequence; and,  
applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence.
- [c13] 13.The method of claim 12, wherein the imaging device is a medical imaging device selected from a magnetic resonance imaging system, a computed tomography system, an x ray system, an x ray angiogram system and an ultrasound system.
- [c14] 14. A method of image compression and decompression for images obtained by a x ray device, comprising :  
selecting at least one frame of interest obtained from the x ray device;  
applying lossless compression to the at least one frame of interest and obtaining therefrom a compressed image sequence; and,  
applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence.
- [c15] 15.A method of image compression and decompression for images obtained by a x-ray angiogram device, comprising:  
selecting a plurality of frames of interest obtained from the x ray angiogram;  
applying lossless compression to the plurality of frames of interest and obtaining therefrom a compressed image sequence; and,  
applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence,  
wherein selecting the plurality of frames of interest comprises selecting at least two time instances and capturing the frames of interest between the two time instances.

- [c16] 16.The method of claim 15, wherein selecting at least two time instances comprises selecting at least one time instance when a dye appears and capturing a second time instance when the dye disappears.
- [c17] 17.A method of image compression and decompression for images obtained by a MRI device, comprising:  
selecting a plurality of frames of interest obtained from a MRI device;  
applying lossless compression to the plurality of frames of interest and obtaining a compressed image sequence; and  
applying decompression to the compressed image data and obtaining an analytically relevant image sequence.
- [c18] 18.The method of claim 17, wherein selecting the plurality of frames of interest comprises using a user select option for manually selecting the frames of interest in a space sequence.
- [c19] 19.A method of claim 17, wherein selecting the plurality of frames of interest comprises using automatic edge detection techniques for selecting the frames of interest in a space sequence.
- [c20] 20.A method of image compression and decompression for images obtained by an ultrasound system, comprising:  
selecting at least one frame of interest obtained from the ultrasound device;  
applying lossless compression to the least one frame of interest and obtaining a compressed image sequence; and  
applying decompression to the compressed image sequence and obtaining an analytically relevant image sequence.
- [c21] 21.The method of claim 20, wherein selecting the at least one frame of interest comprises selecting a fan shaped image using automatic means.
- [c22] 22.The method of claim 20, wherein selecting the at least one frame of interest comprises selecting a fan shaped image using manual means.
- [c23] 23.A method of image compression and decompression comprising:  
selecting a portion of an image in a span of interest obtained from an acquired

imaging sequence;

applying lossy compression to the portion of the image in a span of interest and

obtaining a compressed image sequence; and,

applying decompression to the compressed image sequence and obtaining

therefrom an analytically relevant image sequence.

[c24]

24.An imaging system comprising:

a span of interest definer block for selecting a portion of an image in a span of interest from an imaging sequence;

an image compression block for compressing the portion of the image in the span of interest; and,

an image decompression block for decompressing and reconstructing the image.

[c25]

25.The imaging system of claim 24, wherein the portion of the image is at least one frame in a span of interest.

[c26]

26.The imaging system of claim 24, wherein the portion of the image is plurality of frames in a span of interest.

[c27]

27.The imaging system of claim 26, wherein the plurality of frames comprise frames of interest in time sequence; and frames of interest in space sequence.

[c28]

28.An imaging system of claim 26, wherein the plurality of frames comprise frames of interest in a time sequence.

[c29]

29.An imaging system of claim 26, wherein the plurality of frames comprise frames of interest in a space sequence.

[c30]

30.A machine readable medium for storing computer program code comprising means for:

selecting a portion of an image in a span of interest obtained from an acquired imaging sequence;

applying lossless compression to the portion of the image in a span of interest and obtaining a compressed image sequence; and,

applying decompression to the compressed image sequence and obtaining

therefrom an analytically relevant image sequence.

- [c31] 31.A computer program encoded on a machine readable medium comprising an algorithm for:
- selecting a portion of an image in a span of interest obtained from an acquired imaging sequence;
  - applying lossless compression to the portion of the image in a span of interest and obtaining a compressed image sequence; and,
  - applying decompression to the compressed image sequence and obtaining therefrom an analytically relevant image sequence.